

IN THE CLAIMS:

Claims 1-2 (canceled)

Claim 3 (currently amended). A DC offset compensation system for a direct conversion receiver, comprising:

an incoming radio frequency signal;

a local oscillator (LO) generating a local oscillator signal with a frequency equal to that of said incoming frequency signal;

at least one mixer to mix said radio frequency signal with said local oscillator signal to generate to zero frequency intermediate frequency (IF) signal;

a double sampling means having a calibration phase and a signal flow phase, wherein a compensation signal is generated and stored during the calibration phase, and said IF signal is processed during the signal flow phase;

means to generate and store any DC offset of said IF signal to cancel the DC offset of said IF signal during the signal flow phase; and

means to insert said compensating signal in said IF signal to cancel the DC offset of said IF signal during the signal flow phase,

wherein said compensation signal is generated by applying a calibration signal to derive said compensating signal and storing said compensating signal across a capacitor,

wherein said compensating signal is derived by applying said calibrating signal to the non-inverting input terminal of an operational amplifier, short-circuiting the output of said operational amplifier to the inverting terminal of said operational amplifier to derive said compensating signal at the inverting terminal of said operational amplifier, and

wherein said compensating signal is stored in a capacitor with first electrode connected to said inverting terminal and second electrode of capacitor connected to ground.

Claim 4 (original). The DC offset compensation system as described in claim 3, wherein said operational amplifier constitutes one stage of an IF amplifier to amplify said IF signal.

Claims 5-15 (canceled)